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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,335	10/19/2001	Shuichi Takayama	NAK1-BG86b	9991
20277	7590	07/01/2005	EXAMINER	
MCDERMOTT WILL & EMERY LLP 600 13TH STREET, N.W. WASHINGTON, DC 20005-3096			RAMPURIA, SATISH	
			ART UNIT	PAPER NUMBER
			2191	

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/051,335	Applicant(s) TAKAYAMA ET AL.	
	Examiner Satish S. Rampuria	Art Unit 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-32 and 45-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 29-32 and 45-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date <u>3/3/05</u> |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Response to Amendment

1. This action is in response to the amendment received on 03/16/2005.
2. Claims cancelled by the applicant: 1-28 and 33-44 (previously cancelled).
3. Claims pending in the application: 29-32 and 45-48.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 29 is **still stand** rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claim is non-statutory because it recite components of generating instruction sequence from source code, representing functional descriptive material without a computer readable medium or computer implemented, program per se are not tangibly embodied. Claims 29-32 thus amounts to only abstract idea and are nonstatutory.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if

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the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 29-32 and 45-48 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 5,559,975 to Christie et al. (hereinafter called Christie).

Per claim 29:

Christie disclose:

- A compiler that generates an instruction sequence from source code (col. 5, lines 11-12 “Instructions decoder 108 examines the instructions and determined the appropriate action”),
- the compiler generating a program counter relative value calculating instruction that is executed by a processor (col. 5, lines 9-10 “a fetch program counter value which I generated by instructions cache”), the program counter relative value calculating instruction being an instruction that performs a calculation using a first value and a program counter relative value and uses a result of the calculation to update the first value, the first value being one of
 - (a) a value of a program counter stored in a register (col. 6, lines 11-12 “program counter value is also stored in a program counter register in register file 112”), and
 - (b) the value stored in a program counter of the processor (Abstract, “A processor which includes a fetch program counter circuit and an execute program counter”),
- wherein upper bits of the first value indicate a memory address at which a processing packet is stored (col. 9, lines 46-49 “Byte queue... upon detecting... indicates the byte of the target and the new target address to decode program counter” and (col. 11, lines 3-5 “Incrementer 330 receives the upper 28 bits... provides an incremented decode PC

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value”), and lower bits of the first value of the program counter indicate a processing target instruction that is included in the processing packet (col. 9, lines 51-52 “program counter value... provided to branch section 135 as well as low order bits and carry bits of the decode program counter value for each dispatched ROP”).

Per claims 30 and 31:

The rejection of claim 29 is incorporated, and further, Christie disclose:

- wherein the processor includes a lower bit calculating unit and an upper bit calculating unit (col. 10, lines 11-15 “program counter generator circuit 242 includes... less significant portion program counter latch 306, more significant portion program counter generator circuit 308”),
- the program counter relative value calculating instruction having the lower bit calculating unit perform a lower bit calculation (col. 10, lines 60-61 “Less significant program counter generator circuit 310 provides the carry bits from each adder to carry selector 334”) and the upper bit calculating unit perform an upper bit calculation (col. 10 and col. 11, lines 66-67 and 1 “More significant program counter latch 304 provides bits 4:31 of the next program counter value to more significant program counter generator circuit 308”),
- the lower bit calculation being an addition using lower bits of the first value and lower bits of the value of the program counter relative value (col. 11, lines 28-29 “allocate multiplexers 338 receive the lower order next program counter values (LPC)”), where a result of the lower bit calculation is set as the lower bits of the first value (col. 11, lines

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21-23 “Multiplexer... selects one of four potential lower order next program counter values as bits 0:3”) and any generated carry is sent to the upper bit calculating unit (col. 11, lines 30-31 “the carry values (CARRY) and provide these values to reorder buffer 114 for each ROP that is dispatched”), and

- the upper bit calculation being an addition using upper bits of the first value (col. 12, lines 3-5 “Incrementer 330 receives the upper 28 bits of the present decode PC value... a value in which the upper 28 bits are incremented by one”), upper bits of the value of the program counter relative value and any carry received from the lower bit calculating unit (col. 11, lines 11-12 “Carry selector circuit 334 uses the carry bits from less significant portion program counter”), where a result of the upper bit calculation is set as the upper bits of the first value (col. 11, lines 14-17 “If the carry bit of the next ROP to be dispatched is active... then the incremented decode PC value is used for the upper 28 bits of the next decode PC value”).

Per claim 32:

The rejection of claim 29 is incorporated, and further, Christie disclose:

- wherein the processor includes an upper bit calculating unit (col. 10, lines 11-15 “program counter generator circuit 242 includes... more significant portion program counter generator circuit 308”),
- the program counter relative value calculating instruction having the upper bit calculating unit perform an upper bit calculation and setting lower bits of the program counter relative value as lower bits of the first value (col. 10 and col. 11, lines 66-67 and 1 “More

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significant program counter latch 304 provides bits 4:31 of the next program counter value to more significant program counter generator circuit 308”), and

- the upper bit calculation being an addition using upper bits of the first value (col. 12, lines 3-5 “Incrementer 330 receives the upper 28 bits of the present decode PC value... a value in which the upper 28 bits are incremented by one”) and upper bits of the value of the program counter relative value (col. 11, lines 11-12 “Carry selector circuit 334 uses the carry bits from less significant portion program counter”), where a result of the upper bit calculation is set as the upper bits of the first value (col. 11, lines 14-17 “If the carry bit of the next ROP to be dispatched is active... then the incremented decode PC value is used for the upper 28 bits of the next decode PC value”).

Claims 45-48 are the computer program product claim corresponding to method claims 28-32 respectively, and rejected under the same rational set forth in connection with the rejection of claims 28-32 respectively, above.

Response to Arguments

8. Applicant’s arguments with respect to claims have been considered but they are not persuasive.

In the remarks, the applicant has argued that:

- (i) Claim 29 is rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter. This rejection is traversed because the claim is drawn to a “compiler”.

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- (ii) Chirstie does not disclose or suggest each and every limitation recited in the combination recited in independent claim 29 and 45.

Examiner's response:

- (i) Regarding the rejection under 35 U.S.C. 101 for claim 29, it is stand rejected.
Compiler is a program is very well known to the one of ordinary skill in the art, that translates/transform the code to the machine language i.e., executable code. Program per se is not statutory, however, computer readable media or computer implemented method would be statutory. See MPEP § 706.03(a). Therefore, the rejection is proper and maintained herein.
- (ii) Regarding claims 29 and 45, Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Satish S. Rampuria** whose telephone number is (571) 272-3732. The examiner can normally be reached on 8:30 am to 5:00 pm Monday to Friday except every other Friday and federal holidays. Any inquiry of a general nature or relating to the status of this application should be directed to the **TC 2100 Group receptionist: 571-272-2100**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Tuan Q. Dam** can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Satish S. Rampuria
Patent Examiner
Art Unit 2191
6/27/2005


ANIL KHATRI
PRIMARY EXAMINER